



## RESEARCH ARTICLE

### ASSESSMENT OF THE CURRENT CONDITION OF WILDLIFE DIVERSITY IN YANKARI GAME RESERVE, BAUCHI STATE, NIGERIA

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#### ABSTRACT

The negative interactions between humans and wild animals had attracted diverse undesirable consequences, both on people, resources, wildlife, and their habitats. The aim of this study assessed the current condition on wildlife species in Yankari Game Reserve, Bauchi State, Nigeria, Methods, the study involved the use of qualitative data, the data were collected using FGD with 3 local communities, 1 FGD with management staff and 2 with forest guides (rangers), the data collected for this study were analyzed using descriptive statistics using and thematic analysis. The finding indicated that wildlife species is dwindling, declined and ultimate extinction of some wildlife species in the game reserve due to various effects of human activities. This study concluded that the wildlife species has significant changes over since from the creation of the game reserve. It is recommended that Management should provide special training, funds, equipment and motivation to the rangers in order to encourage the activities of rangers for regulating related human activities in the game reserve.

**Keywords:** Wildlife, biodiversity, game reserve, human activities, endangered species.

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## **1.0. INTRODUCTION**

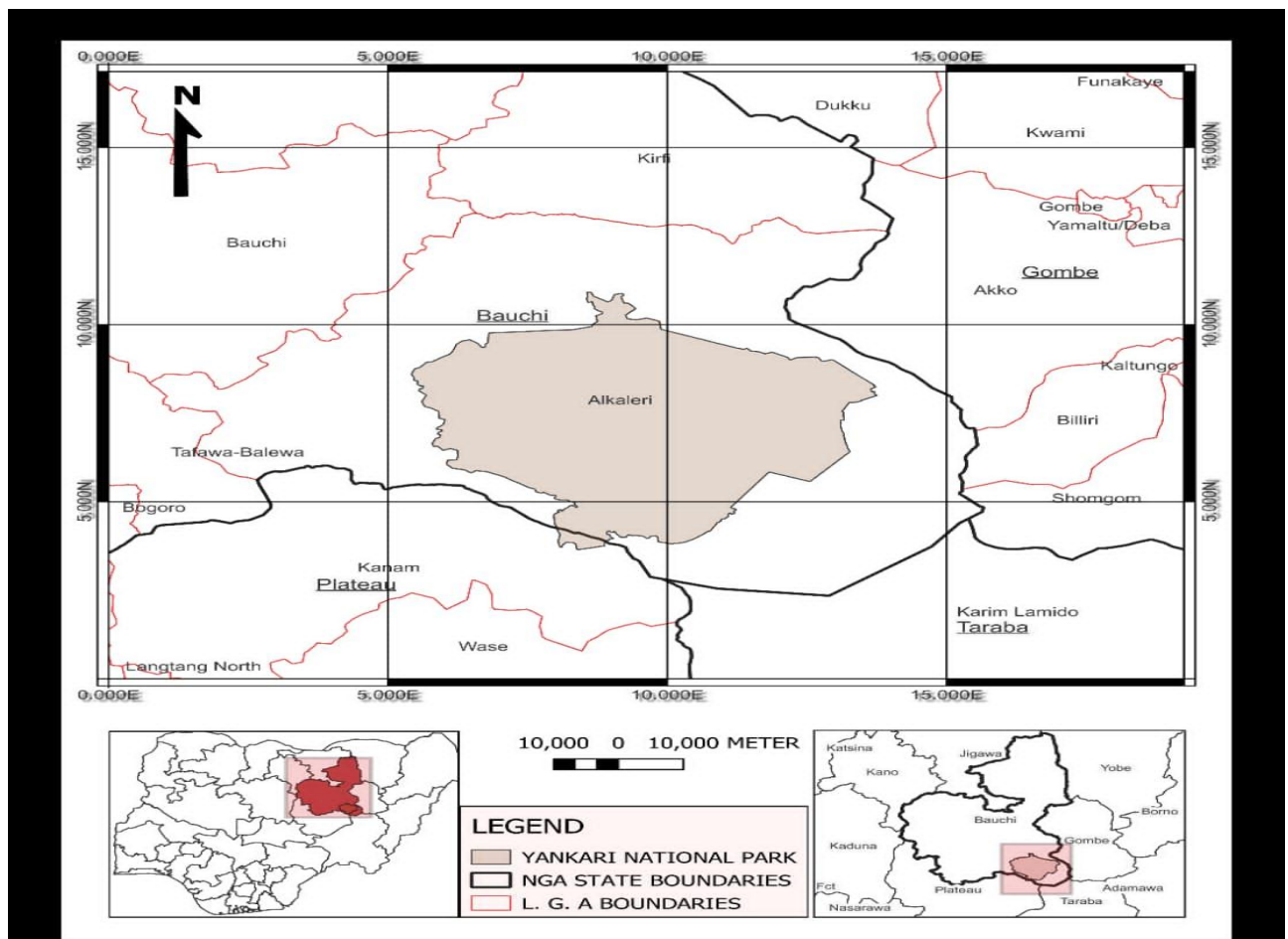
Wildness is a process that has become an otherness to humans but nevertheless remains a source of insight and inspiration (John & Marsh, 2020). Wild(ness) is a place not domestic but not wild somewhere in between. Places such as national parks and orchards are considered wild(ness) often a place maintained and organized by humans (John, 2014). Wildlife denotes the fauna and flora of a region (animals living and plant growing their natural environment) (John, 2014). These are the natural plants, animals, insects and other organisms that evolved naturally in a particular area without human interference (Maharazu, 2023). Human activities that affect wildlife and their habitats are pervasive and increasing over the years and these activities are manifested at all ecological scales, from short-term changes in the behavior of an individual animal through local extirpations and global extinctions (Pimm et al. 1995).

Globally, the rate at which varieties of species of plants and animals were lost supersedes its natural lost and gains, the daily increase of human activities resulted in the destruction of natural resources which necessitate the establishment of conservation and protection of the environmental resources globally (Grigoroudis, et al., 2014). Today search for resources lead to habitats destruction and fragmentation, extinction of species and the general decline or loss of biodiversity (Frikvist, 2015). The threats on wildlife survival caused by human encroachment had been one of the major drivers of global environmental problems (Leiserowitz, 2010).

The consequently, understanding the effects of human activities on wildlife populations and their habitats, as well as devising strategies to ameliorate these effects, is an increasing challenge for resource managers. Human interactions with the environment that supports them have had profound impacts in many ways, in the last fifty years, ecosystems have changed more rapidly and extensively compared to any period in human history, with more than 60 percent of the world's ecosystems degraded (Konisky, et al. 2008). With the loss of unprotected natural habitat, the protected area, in some extreme cases, remains the last fragment of natural habitat.

## 2.0. THE STUDY AREA

The study was conducted in Yankari Game Reserve North-eastern Nigeria which is located on latitude  $9^{\circ}45'16''\text{N}$  and  $9^{\circ}75'44''\text{N}$ , and longitude  $10^{\circ}30'37''\text{E}$  and  $10^{\circ}51'03''\text{E}$ . It is a large wildlife reserve with an area of 2,244.10 km<sup>2</sup>. Yankari is a premier Game Reserve in Nigeria and is a home of several natural warm water spring as well as variety of flora and fauna (Henshaw, 1975). Its location in the heartland of the West African savanna makes it a unique place for tourists and holiday makers to watch wildlife in its natural habitat. It is a very popular eco-touristic destination in West Africa.



**Figure1:** Bauchi showing the Location of Yankari Games Reserve (YGR).

**Source:** Authors Field Survey (2021).



### **3.0. METHODOLOGY**

#### **3.1. Population**

The population of the study comprises all the members of local communities who were found closed to the reserve and management staff and forest guides in the game reserve. Provided, such person have the information required for the study.

#### **3.2. Sampling**

Purposive sampling technique was used to select 3 communities, management, and rangers for focus group discussion in the game reserve.

#### **3.3. Data Collection and Data Analysis**

Focused group discussion was conducted for collection data of the study. 3 FGD were conducted with local communities, 1 session of FGD were conducted with management staff and 3 session of FGD were conducted with forest guides which enable to elicit information on current conditions of wildlife in the game reserve. The data obtained from FGD were analyzed using thematic analysis. Thematic analysis has a lasting contributions to social understanding from qualitative research, as well as the sheer number of contributing social thinkers, are significant (Dabbs, 1982).

### **4.0. RESULTS AND DISCUSSIONS**

#### **4.1. Community Alliances with Wildlife Species**

Based on the study findings we were able identified seven endangered species that are affected by human activities, these are: elephants, baboons, lions, buffalos, hippopotamus, western heart beasts, roan antelopes. Wilson (1992) has stated that biodiversity is facing a decline of crisis proportions which could ultimately lead to mass extinctions wild animals in the very near future.

Elephants and baboons: the finding of this research indicated that elephants and baboons are the major species that are been affected due they grazing onto community's' farm lands in which they devastated the crops and people kill them for protection and retaliation. The respondents explained that: "they retaliate because there is no any compensation giving from



the government or management". It is frustrating to local communities because wildlife-induced losses are generally never compensated. To deal with wildlife-related problems, they may persecute wildlife through displacement and illegal killing, it is obvious that to control elephants and baboons encroachment onto the community's farmlands is very difficult endeavor (Osemeobo, 1993).

Lions, buffalos, hippopotamus western heart beats and roan antelopes: the finding of this research indicated that these wildlife species are commercial in nature most of which are selling for meat and traditional medicine, elephants and lions are of more commercial because they use for both traditional medicine and prestige. The respondents affirmed that: "the elephants trunk are very expensive for both local and international trade". Continuous threats from these sources lead to increased pressure on biodiversity and possible lead to extinction of some species (McSweeney, 2003).

#### **4.2. Composition of major Endangered Species**

Based on FGD conducted with the respondents in the study area they were able identified seven major endangered species that are threatened by human activities, these are: elephants, baboons, lions, buffalos, hippopotamus, western heart beasts, roan antelopes.

Elephants and baboons: the finding of this research indicated that elephants and baboons are the major species that been affected due they grazing onto community's' farm lands in which they devastated the crops and people kill them for protection and retaliation. The respondents explained that:

*"we kill an elephant because they encroachment onto our farm lands and destroyed most crops that lead us to retaliate because there is no any compensation giving from the government or management of the reserve".*

Lions, buffalos, hippopotamus western heart beats and roan antelopes: the finding of this research indicated that these wildlife species are commercial in nature most of which are selling for meat and traditional medicine, elephants and lions are of more commercial because they use for both traditional medicine and prestige. The game reserve is particularly important to the local communities, serving as their traditional hunting grounds, especially during their annual festival.



In addition, conflict between elephants and local communities living near the boundaries of the reserve as a result of crops damage has reduces the level is of community support for the game reserve and encourage local communities to support elephant's poacher from outside the region. The finding is in agreed with the work of Osemeobo (1993) reported that wildlife-related problems, they may persecute wildlife through displacement and illegal killing, it is obvious that to control elephants and baboons encroachment onto the community's farmlands is very difficult endeavor. In communities with little subsistence economy even small losses can be of economic importance and can generate negative attitudes toward wildlife and conservation in general (Oil *et al.*, 1994).

#### **4.3. Condition of Wildlife**

The finding of this research on the condition of wildlife indicated that there are more number of wildlife species in the past more than the present time.

The respondents emphasized that:

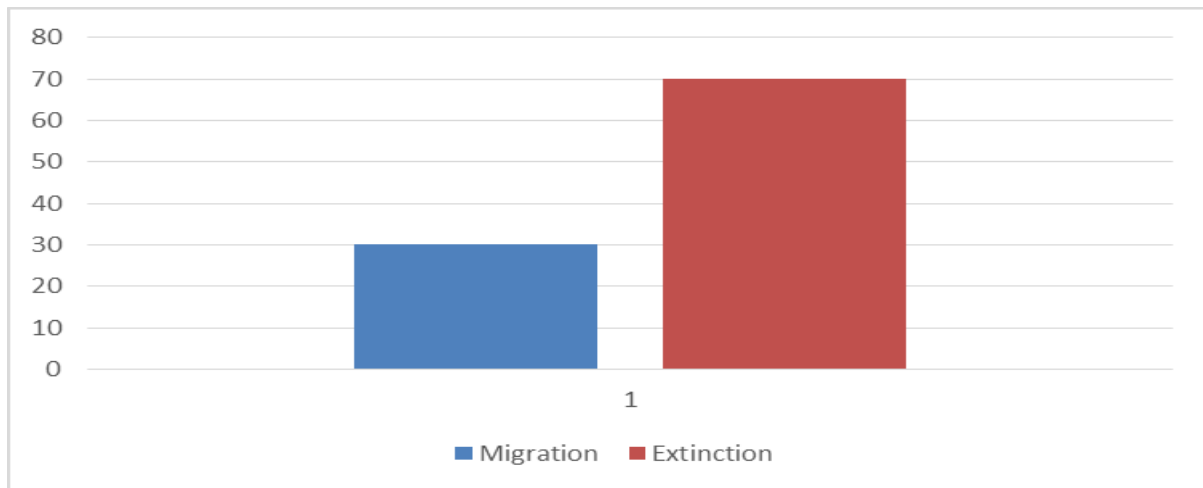
*"the continue excessive poaching and lack of proper protection resulted in declined for wildlife species in the game reserve".*

This findings is in agreed with the work of Wilson (1992) has stated that wildlife is facing a decline of crisis proportions which could ultimately lead to mass extinctions of wild animals in the very near future. Consequently, understanding the effects of humans activities on wildlife and wildlife populations, as well as devising strategies to ameliorate these effects, is an increasing challenge for resource managers. Given the conflicting mandate to both encourage human use and to protect sensitive natural resources in national parks, developing reliable strategies for assessing and monitoring the effects of human activities on natural resources is essential to ensuring appropriate stewardship of these resources (Turner, *et al.*, 1990).

#### **4.4. Direct Effects of Human Activities on Wildlife**

Based on the finding indicated that 30% of human activities result to wildlife migration and 70% of human activities caused wildlife extinction in the game reserve. This indicated that (70%) the respondents (protection staff) were agreed that human activities within the game reserve accounting the wildlife extinction in YGR.



**Figure 4:** Effects of Human Activities on Wildlife.**Source:** Authors' Field work (2021)

The finding is in line with the work of Mcsweeney, (2003) who expantiated that continuous threats to wildlife resource will lead to decreased and possibly extinction of some wildlife species. According to Carpaneto and Fusari, (2013) reported that wildlife exploitation has been widely reported to have an undesirable influence on wildlife populations. Wilson (1992) has stated that biodiversity is facing a decline of crisis proportions which could ultimately lead to mass extinctions in the very near future.

#### **4.5. Management Response to the Changes in Condition of Wildlife**

The finding of this research indicated that the management of the reserve are trying to improve and implement new conservation strategies, as well as providing sufficient funds, good vehicles, and weapons for wildlife protection. It is believed that provision of enough supports will facilitate regular patrols and monitoring of the species, prevent poaching and theft activities that threaten the protected species in the reserve. It will also boost the arrest infiltrators by anti-poaching patrol teams, improved field ration, and strengthen the supplies of equipment and promote regular staff training and protection.

Yankari game reserve is one of the protected areas where by a protection staff (rangers) are manage and conserve the ecological resource and supervised by high wildlife officers. These rangers are based at strategic ranger posts in the villages surround the reserve and some are



central post station in the Wikki camp. The research finding is in agreed with the work of Chapin, *et al.*, (2000) explained that, many attempts to understand the effects of human activities on wildlife and developmental measures that are most appropriate for such threats. Many research studies have used reproductive success as the response measure and have reported the relationship between the level of human activity and reproductive success are in viable (Fraser, *et al.*, 1985).

## **5.0. CONCLUSION AND RECOMMENDATION**

It can concluded that the wildlife species is dwindle, declined and ultimate extinction of some wildlife species in the Game Reserve due to various effects of human activities, mostly, the frequent occurrence of indiscriminate hunting of wild animals in the game reserve. In any community with little subsistence economy even small losses can to generate negative attitudes toward wildlife species. In any community with little subsistence economy even small losses can to generate negative attitudes toward wildlife species. It is recommended that Management should provide special training, funds, equipment, and other motivation to the rangers in order to encourage the activities of rangers for regulating human activities in the Game Reserve.

## **Competing Interest**

The authors have declared that no conflicting interest exist in this manuscript.

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